IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Arneson, *et al*	Confirmation No.: 6909
Application No.: 09/496,960	Art Unit: 3622
Filed: February 3, 2000	Examiner: James W. Myhre
For: **Automated Real-Time Distributed Tag Reader Network**	Atty. Docket: 1689.0010002

Reply Brief Under 37 C.F.R § 41.41

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Sir:

Appellants filed a Brief on Appeal to the Board of Patent Appeals and Interferences for the above-captioned application on September 22, 2004, appealing the decision of the Examiner in the Final Office Action mailed April 22, 2004. The Examiner's Answer was mailed on November 26, 2004. In reply to the Examiner's Answer, Appellants submit this Reply Brief Under 37 C.F.R. §41.41.

I. Grouping of Claims by the Examiner is Moot

In the Examiner's Answer, the Examiner stated that the "rejection of claims 1-31 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof." (Examiner's Answer, p. 2). Appellants note that Appellants' Brief on Appeal was filed on September 22, 2004, after the effective date of new part 41 of the Code of Federal Regulations. Section 41.37 was added "to generally incorporate the requirements of Rule 192." (Federal Register, Vol. 69, No. 155, p. 49962). In the explanation of

changes, the Federal Register states that the "grouping of claims requirement set forth in former Rule 192(c)(7) is removed. The general purpose served by former Rule 192(c)(7) is addressed in §41.37(c)(1)(viii)." (*Id.*). Appellants provided an appendix containing a copy of the claims involved in the appeal, as required by §41.37(c)(1)(viii). (Brief on Appeal, pp. 22-27). Thus, Appellants submit that the Examiner's comment regarding the grouping of claims is moot, in light of Rule 41 which was in force at the time Appellants' Brief on Appeal was filed. Furthermore, Appellants respectfully request the Examiner's statement that "the rejection of claims 1-31 stand or fall together" be withdrawn.

II. There is no suggestion or motivation to modify Guthrie to obtain the claimed invention recited in claims 1-15, 17, 19-32, and 35

Appellants maintain their position that no suggestion or motivation exists to modify Guthrie to obtain the claimed invention recited in claims 1-15, 17, 19-32, and 35. To establish a *prima facie* case of obviousness, the Examiner must show that there was a suggestion or motivation to modify Guthrie to obtain the claimed invention. As discussed below and in Appellants' Brief on Appeal, this suggestion or motivation does not exist. To further support his position, in the Examiner's Answer, the Examiner makes a broad conclusory statement that it would have been obvious to one having ordinary skill in the art to use wireless communication means "in place of the wired connections in Guthrie in order, if for no other reason, to decrease the congestion of wires running throughout each room, which has been a problem in the art for many years." (Examiner's Answer, p. 13). However, as cautioned by the Federal Circuit, "[b]road conclusory statements standing alone are not 'evidence'" of a suggestion or motivation to modify a reference. In re Kotzab, 217 F.3d 1365, 1369 (Fed. Cir. 2000).

As discussed in Appellants' Brief on Appeal, Guthrie teaches away from the use of wireless communications between sensors and collectors. (Brief on Appeal, p. 11). Specifically, in the Background section, Guthrie discloses a system that uses wireless transmissions for scanning identification numbers associated with transceivers. (Guthrie, col. 3, lines 15-47). However, Guthrie then discloses that this prior art system is not appropriate in the context of the disclosed global equipment tracking system invention. Guthrie lists several reasons why the prior art wireless system is not adequate for the disclosed invention. First, Guthrie states that the prior art system "uses RF transmission which is not suitable for Federal Government facilities, for example, where highly sensitive equipment can be operationally contaminated by stray signal transmissions and where secrecy considerations are required." (Guthrie, col. 3, lines 40-44). In addition, Guthrie states that the prior art wireless system is inadequate because it "cannot recognize and report the identity of equipment which the user relocates into another room." (Guthrie, col. 3, lines 26-31).

Based upon the above, Appellants submit that Guthrie clearly and unequivocally teaches away from a wireless inventory system. Thus, there is no evidence of a suggestion or motivation to modify Guthrie to obtain a system for and method of conducting a wireless inventory recited Appellants' claims 1-15, 17, 19-32, and 35.

Appellants further maintain their position that modifying Guthrie to poll sensors wirelessly would render Guthrie unsatisfactory for its intended purpose. In further support of his position, the Examiner stated in the Examiner's Answer:

> The Appellant also argues that Guthrie would be rendered unsatisfactory for its intended purpose if wireless connections were used in that the collector "would have no method of associating a received bit with a particular transmitting sensor" (page 12). The Examiner notes that Guthrie is not identifying the sensor based on which wire the reply was received. If so, there would be no reason to repeat the request and reply for the other bits of the sensor ID number

> as the Appellant has point out happens in Guthrie. Just the fact that a response was received over that particular wire would be enough to determine whether or not the sensor was still attached thereto. Thus, the Appellant's argument is not consistent with his own discussion of the reference.

(Examiner's Answer, p. 13)

Appellants submit that the Examiner has misunderstood and mischaracterized Appellants' argument. Appellants agree that Guthrie does not identify a specific sensor solely based upon which wire the reply was received. This was not Appellants' argument. Appellants argue that the link on which a bit is received is used to associate the received bit with prior and/or future received bits from a sensor. In Guthrie, a sensor transmits a single bit of its ID upon receipt of pulse from a collector. (Guthrie, col. 9, lines 35-44). The sensor does not transmit any identifying information with the single bit of its identification. Thus, upon receipt of a bit, the collector knows that a sensor is attached to the wire but does not know which specific sensor. In addition, a single collector can read up to eight sensors in parallel. (Guthrie, col. 9, lines 65-66). Thus, without using knowledge of the wire upon which a bit was received, Guthrie would have no mechanism for associating received bits with a particular sensor and no mechanism for associating prior and future received bits with each other.

Appellants submit the following example to further highlight their argument. Assuming arguendo that the collector in Guthrie and each sensor communicated via a wireless link, when the collector sent a first pulse, the plurality of sensors (e.g., up to 32 sensors) would respond with a first bit of their sensor identification number simultaneously. For example, 16 sensors may transmit a "1" and 16 sensors may transmit a "0." While the collector may be able to distinguish the bit values received (e.g., that a "1" and a "0" was received), the collector, as taught by Guthrie, has no mechanism to associate a sensor with a received bit value. This situation is exacerbated

when a second pulse is sent. Upon receipt of the second pulse, the plurality of sensors would respond simultaneously with a second bit of their sensor identification number. Again the collector may be able to distinguish the bit values but has no mechanism to associate the second bit with a particular sensor or to associate the received second bit with a received first bit.

As discussed above, when reference to a specific wired connection is removed, Guthrie has no mechanism for handling collisions or associating received bits with a particular transmitting sensor. Thus, Appellants submit that simply replacing the wired connection in Guthrie with wireless connections would render Guthrie inoperable for its intended purpose, tracking individual pieces of equipment.

III. The combination of Guthrie and Walter does not teach or suggest all the claim limitations of claims 16, 34, 37, and 38

Appellants maintain their position that all the claim limitations of claims 16, 34, 37, and 38 are taught or suggested by the combination of Guthrie and Walter. In the Examiner's Answer, the Examiner addressed Appellants' argument that "Guthrie does not teach the use of a first and second number, as recited in Appellants' claims 16 and 24." (Brief on Appeal, p. 20). Specifically, the Examiner stated that "this novel feature of having two separate numbers stored on the tag has been removed from the claims in the present application" and "thus, Appellant's argument is moot." (Examiner's Answer, p. 17). Appellants' language in the Brief on Appeal was intended to be consistent with the language used by the Examiner to characterize claims 16 and 34 in the Office Action dated April 22, 2004. (Paper No. 17, page 12). Appellants herewith clarify the argument from the Brief on Appeal to remove any potential confusion.

In Guthrie, a collector receives one bit from eight different sensors in parallel. (Guthrie, col. 10, lines 3-8). However, the Examiner continues to assert that Guthrie teaches that a sensor "responds with the first eight bits of data from its tag ID." (Examiner's Answer, p. 17). Appellants refer to their argument in the Brief on Appeal, rebutting this understanding. Even assuming arguendo that the Examiner is correct in the understanding that the sensors transmit eight bits of data at a time, the sensors in Guthrie will always transmit their entire sensor ID. Appellants note that the Examiner does not assert that each sensor in Guthrie maintains a first tag count and a second tag count, as recited in Appellants' claims 16 and 34. Therefore, under the Examiner's understanding, a sensor would transmit its first set of eight bits upon receipt of a first pulse, its second set of eight bits upon receipt of a second pulse, its third set of eight bits upon receipt of a third pulse, and its fourth set of eight bits upon receipt of a fourth pulse.

In Appellants' invention, as recited in claims 16 and 34, a tag increments a first tag count in response to received first clock signals and transmits at least a first plurality of the plurality of bits identifying the tag when the first plurality of bits corresponds to the first tag count. In other words, when the value of the tag count corresponds to the first plurality of bits, the tag transmits at least the first plurality of bits. If only one tag responds, no additional reader to tag communication is required. In the event more than one tag responds, the reader transmits a first reader count followed by a second clock signal. At each contending tag, the tag increments a second tag count in response to received second clock signals and transmits at least a second plurality of the plurality of bits identifying the tag when the second plurality of bits corresponds to the second tag count. Appellants respectfully note that the Examiner referred to the second plurality of the plurality of bits identifying the tag as "a second number" in both the Office Action and Examiner's Answer.

Appellants' submit that even assuming arguendo that the Examiner is correct in the understanding that the sensors in Guthrie transmit eight bits of data at a time, Guthrie does not teach or suggest all the claim limitations of claims 16 and 34. For example, Guthrie does not teach or suggest a sensor having a first tag count and a second tag count. As a result, Guthrie also does not teach transmitting a first plurality of bits when the first plurality of bits corresponds to the first tag count or transmitting a second plurality of bits when the second plurality of bits corresponds to the second tag count. Walter does not overcome all of the deficiencies of Guthrie relative to claims 16 and 34, described above. Therefore, Appellants respectfully submit that all the limitations of claims 16 and 34 are not taught nor suggested by the combination of Guthrie and Walter.

In the Examiner's Answer, the Examiner also addressed Appellants' argument that notion of time slot contention is illogical in the system disclosed by Guthrie. Specifically, the Examiner stated that "Appellant's argument in reference to Claim 37 and 38 (page 20) that 'the notion of time slot contention is illogical' in Guthrie because it only pertains to a wired system." (Examiner's Answer, p. 18). Appellants submit that the Examiner has mischaracterized Appellants' argument. Appellants did not argue that time slot contention is not possible in a wired system. Appellants argued that "because Guthrie describes a system where each sensor is physically connected to a buffer in the collector and the collector receives bits from a plurality of sensor in parallel, the notion of time slot contention is illogical." (Brief on Appeal, p. 20). In Guthrie, the transmitting sensors do not and cannot contend because each bit is received over a separate wire and stored in a pre-allocated separate buffer. The collector can always correlate a received bit to an individual sensor, even when multiple bits are received in parallel. Thus, Appellants maintain their position that the notion of time slot contention is illogical in the wired system taught by Guthrie.

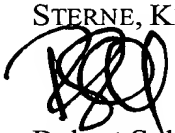
The Examiner further states that "Guthrie addresses this very issue and overcomes it by inactivating non-matching tags, sending a second signal to the remaining tags, and repeating the inactivating and signaling steps until only one tag responds to the signal." (Examiner's Answer, p. 18). Appellants disagree with this understanding of Guthrie. Guthrie does not address time slot contention. Furthermore, Guthrie does not teach "inactivating non-matching tags, sending a second signal to the remaining tags, and repeating the inactivating and signaling steps until only one tag responds to the signal", as suggested by the Examiner. If the Examiner maintains this argument, Appellants request that the Examiner provide specific support in Guthrie for these assertions.

IV. Conclusion

In light of the arguments above, as well as those set forth in Appellants' Brief on Appeal filed September 22, 2004, Appellants respectfully submit that the final rejections of claims 1-38 are improper and should be reversed.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



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